Value-Added Workers Earn Less, Have Less Education Than Other Rural Manufacturing Workers

Value-added industries employed one-third of all rural manufacturing workers in 1996. Value-added workers generally have lower occupational status and less education than other manufacturing workers, which is reflected in their lower average weekly earnings. Wages in value-added industries have grown only slightly overall during the 1990's, but more rapidly for women.

Approximately 1.5 million workers, 33 percent of the rural manufacturing wage and salary work force, were employed in value-added industries in 1996, according to data from the Current Population Survey (CPS). Manufacturing provides 18 percent of all rural jobs. Due to limitations in the CPS, these industries are delineated according to a broader definition of value-added than the one used elsewhere in this issue (see "Definitions" appendix). Value-added workers form a particularly large share of the manufacturing work force in the South, where lumber, furniture, and paper are key industries throughout much of the region. These industries are far less important to the Midwestern rural economy, and value-added workers are a smaller share of the work force there. Since value-added industries tend to use raw timber and agricultural products as inputs, their employment share in rural areas is larger than in urban areas. Despite the pressures of an increasingly competitive international market and the introduction of labor-saving technology, value-added industries' share of total rural manufacturing employment has remained steady since 1990.

Value-Added Workers Have Less Education, Lower Occupational Status

Rural value-added industries rely more on less-educated, male, and Hispanic workers than do other manufacturing industries. Value-added manufacturing workers are less likely to be women, for example, but more likely to be Hispanic (table 1). Two-thirds of rural Hispanics employed in manufacturing work in value-added industries, compared with one-third of all rural manufacturing workers. Rural value-added manufacturers also require

Table 1

Selected characteristics of rural value-added and other manufacturing workers

Value-added industry workers are less educated and more likely to be male and Hispanic than other manufacturing workers

Category	Value-added	Other manufacturing
	Percent	
Men	72	64
Women	28	36
Age:		
16-24	14	14
25-60	81	82
Over 60	5	4
Black	14	12
Hispanic[1]	10	3
White	85	87
Less than high school	24	15
High school[2]	71	75
College	5	10
Managerial, professional, technical[3]	16	25
Craft	23	20
Other blue collar, service	61	55

[1]Hispanics may be of any race. [2]Includes workers who attended college but did not complete a 4-year program. [3]Includes sales, clerical, and administrative support workers.

Source: Calculated by ERS using data from the 1996 Current Population Survey.

relatively fewer managerial, professional, and technical workers (14 percent vs. 25 percent in other manufacturing). Accordingly, value-added workers have lower average levels of educational attainment. They are less likely to have a high school diploma or college degree than other rural manufacturing workers. The same patterns appear to hold for metro value-added workers as well, indicating that relatively low education and occupational attainment is endemic to value-added industries, not primarily a result of the location of high-skill jobs in cities.

Value-Added Earnings Lower Due to Work Force Composition

In keeping with lower levels of education and occupational status, value-added wage and salary workers in rural areas earn less than other manufacturing workers. However, they earn much more than service workers (table 2). Weekly earnings for value-added workers in 1996 averaged $451. Other manufacturing workers earned 7 percent more ($483), while service workers earned about 14 percent less ($388). Most of the difference between value-added and other manufacturing pay can be traced to the educational composition of the two work forces. College graduates 25 years and older, for example, earn about the same amount in both kinds of manufacturing—$818 in value-added compared with $809 in other manufacturing.

Differences in weekly earnings between value-added and service workers, on the other hand, are due largely to the greater incidence of part-time work among service workers. Most rural value-added workers (95 percent), like other manufacturing workers, are employed full-time, compared with just 72 percent of rural workers in service industries. When full-time workers only are compared, the 18-percent wage gap in favor of value-added workers reverses to a 4-percent gap in favor of service workers. The change is less surprising than it first appears. The service sector is highly diverse. Many of its workers are quite well educated and enjoy high-status occupations compared with manufacturing workers. Other jobs typically found in the service sector, such as restaurant and sales clerk jobs, require even less skill than those in value-added manufacturing.

Rural value-added workers earn about 20 percent less than their urban counterparts. Unlike the comparison with other rural workers, the difference is attributable to greater monetary rewards for the same level of education, as well as to higher urban education and skill levels. But the returns to additional education are also larger in urban areas. For example, value-added workers with less than a high school diploma earn about the same amount in urban and rural labor markets. High school graduates earn about 10 percent more in urban labor markets, however, while college graduates earn 15 percent more.

Table 2

Average weekly earnings of value-added and other selected workers, 1996

Differences in educational composition explain much of the difference between rural value-added and other manufacturing workers

Category	Rural value-added	Other rural manufacturing	Rural services	Urban value-added
		Dollars		
All wage and salary workers	451	483	388	539
Less than high school	379	375	265	368
High school[1]	485	495	393	534
College	818	809	630	944
Full-time	462	498	479	556

[1]Includes workers who attended college but did not complete a 4-year program.
Source: Calculated by ERS using data from the 1996 Current Population Survey.

Comparisons using only average demographic or earnings statistics for valued-added workers ignore the diversity within the value-added industry group (fig. 1). Paper industry workers, for example, earn well above the average for all manufacturing industries ($559), and have relatively well-educated workers, but food processing employees are less educated and earn considerably less than the average ($408). Furniture and lumber industry wages are closer to the manufacturing average.

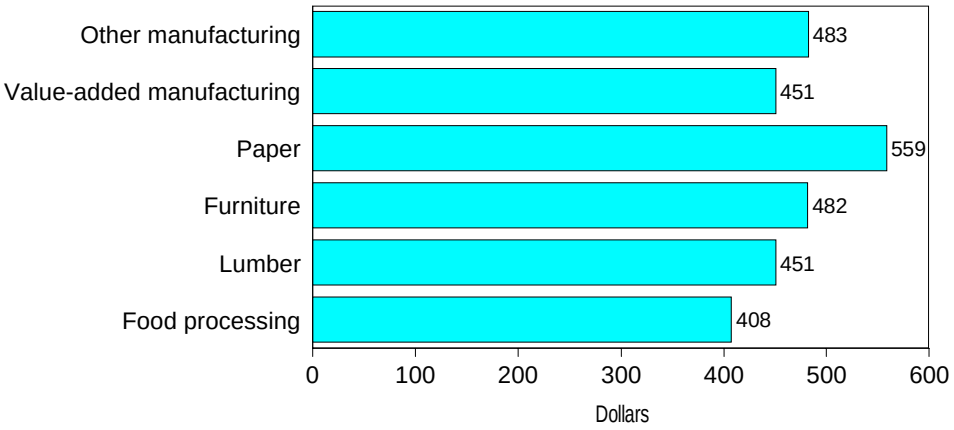
Value-Added Earnings Grew Rapidly for Women in the 1990's

The rural value-added work force has changed during the 1990's, but very slowly. Relatively more workers had a high school diploma by 1996. Also, the current concentration of Hispanics reflects an influx of these workers since the beginning of the decade. Earnings in rural value-added industries changed little during the 1990's, registering 1.5 percent real growth between 1990 and 1996 (table 3). This rate was similar, however, to the 1.8 percent change for the rural work force as a whole. Men and women workers had sharply different experiences over the 1990-96 period, as men's earnings remained essentially unchanged while women's earnings rose 9 percent. Women's rapid rise partly reflects their movement up the career ladder to better paying jobs, as well as faster earnings growth in many nonproduction-related occupations, where women are disproportionately employed. Earnings similarly diverged between high-status white collar workers, whose earnings fell, and many workers in blue collar and support occupations, where earnings rose moderately. *[Robert Gibbs, 202-694-5423, rgibbs@econ.ag.gov]*

Figure 1

Average weekly earnings by value-added industry, 1996

Paper industry workers earn 37 percent more than those in food processing



Source: Calculated by ERS using data from the 1996 Current Population Survey.

Table 3

Change in average weekly earnings for rural value-added workers, 1990-96

Women's earnings rose much faster than men's, as was true for the overall rural work force

Category	1990	1996	Change, 1990-96
	1996 dollars		Percent
All wage and salary workers	444	451	1.5
Men	488	485	-.7
Women	333	363	9.1
Black	324	342	5.6
Hispanic[1]	312	330	5.8
White	469	470	.2
Less than high school	372	379	1.9
High school[2]	482	485	.6
College	800	818	2.2
Managerial, professional	832	788	-5.4
Technical, sales, clerical[3]	455	453	-.4
Craft	495	492	-.7
Other blue collar, service	380	396	4.3

[1]Hispanics may be of any race. [2]Includes workers who attended college but did not complete a 4-year program. [3]Includes clerical, sales, and administrative support occupations.

Source: Calculated by ERS using data from the 1996 Current Population Survey.